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ABSTRACT

The Comprehensive School Mathematics Program (CSMP) is a program of CEMREL, Inc., one of the national educational laboratories, and is funded by the National Institute of Education. Its major purpose is the development of curriculum materials in mathematics for grades K-6. Beginning in September, 1973, CSMP began an extended pilot trial of its Elementary Program. In May, 1976, a questionnaire was sent to all second and third grade teachers (over 100) of CSMP. This report summarizes responses received from 46% of the sample. Included in the report is a description of the questionnaire, description of 1975-76 students, implementation of the program, perceptions of student achievement and attitudes, experience with CSMP and evaluation of the program, and a summary. Included in the appendices are responses to a number of open-ended questions on the questionnaire. (RH)

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# EXTENDED PILOT TRIALS OF THE COMPREHENSIVE SCHOOL MATHEMATICS PROGRAM:

## EVALUATION REPORT SERIES

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# Evaluation Report 3-C-1
# Teacher Questionaire Data
# Year 3

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SE 022 916

Extended Pilot Trial of the
Comprehensive School Mathematics Program

Evaluation Report 3-C-1

Teacher Questionnaire Data

Year 3

Ava Small

Martin Herbert

September, 1976

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## Description of Evaluation Report Series

The Comprehensive School Mathematics Program (CSMP) is a program of CEMREL, Inc., one of the national educational laboratories, and is funded by the National Institute of Education. Its major purpose is the development of curriculum materials for grades K-6.

Beginning in September, 1973, CSMP began an extended pilot trial of its Elementary Program. The pilot trial is longitudinal in nature; students who began using CSMP materials in kindergarten or first grade in 1973-74, were able to use them in first and second grades respectively in 1974-75, and in second and third grades in 1975-76. Hence the adjective "extended".

The evaluation of the program in this extended pilot trial is intended to be reasonably comprehensive and to supply iformation desired by a wide variety of audiences. For that reason the reports in this series are reasonably non-technical and do not attempt to widely explore some of the related research issues. The list of reports from the first two years of the extended pilot trial is given on the next page. The most comprehensive of these are the following:

1-A-1: Overview, Design and Instrumentation
1-A-3: Final Summary Report, Year 1
2-A-1: Final Summary Report, Year 2
and 3-B-1: Summary of Second and Third Grade Test Data Year 3

Longitudinal Pilot Study of the
Comprehensive School Mathematics Program

Evaluation Report Series

| | |
|---|---|
| Evaluation Report 1-A-1 | Overview, Design and Instrumentation |
| Evaluation Report 1-A-2 | External Review of CSMP Materials |
| Evaluation Report 1-A-3 | Final Summary Report Year 1 |
| Evaluation Report 1-B-1 | Mid-Year Test Data: CSMP First Grade Content |
| Evaluation Report 1-B-2 | End-of-Year Test Data: CSMP First Grade Content |
| Evaluation Report 1-B-3 | End-of-Year Test Data: Standard First Grade Content |
| Evaluation Report 1-B-4 | End-of-Year Test Data: CSMP Kindergarten Content |
| Evaluation Report 1-B-5 | Test Data on Some General Cognitive Skills Related to CSMP Content |
| Evaluation Report 1-B-6 | Summary Test Data: Detroit Schools |
| Evaluation Report 1-C-1 | Teacher Training Report |
| Evaluation Report 1-C-2 | Observations of CSMP First Grade Classes |
| Evaluation Report 1-C-3 | Mid-Year Data from Teacher Questionnaires |
| Evaluation Report 1-C-4 | End-of-Year Data from Teacher Questionnaires |
| Evaluation Report 1-C-5 | Interviews with CSMP Kindergarten Teachers |
| Evaluation Report 1-C-6 | Analysis of Teacher Logs |
| Evaluation Report 2-A-1 | Final Summary Report Year 2 |
| Evaluation Report 2-B-1 | Second Grade Test Data |
| Evaluation Report 2-B-2 | Readministration of First Grade Test Items |
| Evaluation Report 2-B-3 | Student Interviews |
| Evaluation Report 2-C-1 | Teacher Questionnaire Data |
| Evaluation Report 2-C-2 | Teacher Interviews, Second Grade |
| Evaluation Report 2-C-3 | Teacher Interviews, First Grade |
| Evaluation Report 3-B-1 | Second and Third Grade Test Data Year 3 |
| Evaluation Report 3-C-1 | Teacher Questionnaire Data Year 3 |

Key to Indexing

1-C-2 Observations of CSMP First Grade Classes

"2" refers simply to the number within a given year and type of data

"C" refers to the type of data being reported
- A: Overview, summary and theoretical reports
- B: Student outcomes
- C: Non-test data

"1" refers to the year of the Pilot Study according to the following:

| | Kindergarten | First Grade | Second Grade | Third Grade | . . . |
|---|---|---|---|---|---|
| Year 1 (1973-74) | ▨ | ▨ | | | |
| Year 2 (1974-75) | | ▨ | ▨ | | |
| Year 3 (1975-76) | | | ▨ | ▨ | |

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## Introduction

In the fall of 1973, the Comprehensive School Mathematics Program (CSMP) began a longitudinal pilot study of its Elementary School Program. Over 100 teachers began using the program, either in first grade or kindergarten. During the 1974-75 school year, the second year of this pilot study, most of these classes continued into second grade and first grade respectively and many new classes began using CSMP materials. The 1975-76 school year constituted the third year of this pilot study, with most of these classes advancing to the next grade level and again, many new classes beginning CSMP at lower grade levels.

In May, 1976, a questionnaire was sent to all second and third grade teachers (over 100 in all) of CSMP. This report summarizes the responses to this questionnaire. Several of the questions were rather open-ended and called for unstructured responses. The complete set of responses to several of these questions are given in Appendices II, III, and IV.

## Description of the Questionnaire

The items in the questionnaire dealt with four main issues:

a) Description of the class:
   - Grade level
   - Students who transferred

b) Implementation of the program:
   - Time devoted to math instruction
   - Emphasis on program topics
   - Supplementary materials

c) Perception of students' achievement and attitudes according to various student characteristics:
   - Means of evaluating students' progress

d) Experience with CSMP and evaluation of the program:
   - Presence or absence of peer group of teachers
   - Suggestions for revisions
   - Comparison with traditional programs on various dimensions
   - Evaluation of spiral approach
   - Preferred styles of classroom management
   - Perception of valuable teacher characteristics in teaching CSMP
   - Overall evaluation of the program

The questionnaire consisted of six pages. A copy of the questionnaire is given in Appendix I.

Of 114 questionnaires distributed to local and outer ring sites, 52 were returned. This is a 46% rate of return. When examined on a separate grade level basis, one finds a 47% rate of return for second grade teachers (32 out of 68) and a 39% rate of return for third grade teachers (18 out of 46). These return rates can be compared with a 53% return rate to a 1975 CSMP questionnaire and a 58% end-of-the-year return rate in 1974.

A low rate of return tends to reduce the impact of the results, as it is difficult to determine whether any significant differences exist between the teachers who did and did not return the questionnaire. An informal study was done to examine this issue. Based on impressions of teachers' attitudes made during the year by observing classes and interviewing teachers, it was determined that no significant relationship could be found between how positive (or negative) a teacher's attitude was toward CSMP and her tendency to return the questionnaire (i.e. the return rate was about the same for teachers who were judged to be positive and those judged negative towards the program). Thus, it could not be shown that those who dislike the program are less likely to return the questionnaire and, conversely, that those who like the program are more likely to return the questionnaire.

## Description of the 1975-76 Class

Sixty-two percent of the teachers responding to this questionnaire taught second grade while 35% taught third grade. The remaining 3% (2 teachers) taught a mixed-grade level class. For each question the responses are described separately for each grade level.

Question: Approximately how many students who were in your class in September are no longer in it now? How many of these students, if any, were placed in a Non-CSMP class in your school? Why?

Of the 161 students reported to have left CSMP classes since September, 16 were placed in a Non-CSMP class within the same school. Ten of the 16 were from second grade classes while 6 were from third grade. The two second grade teachers stated that students transferred because they "could not keep up." Reasons for transfers given by third grade teachers were: placement in EMR class (one response) and overcrowding in class (two responses).

Question: Approximately how many students who are in your class now were not in it on October 1? How successful were these students in catching up with the rest of the class and why?

Second grade teachers reported a total of 80 new students. Out of 28 teachers responding to this question, 16 (57%) reported that their new students had been successful in catching up with the rest of the class. When asked to explain the reasons for their success, 3 teachers indicated students received extra help from the teacher, 2 teachers attributed their students' success to their being "quick," and one volunteered that her class as a whole was slow. Two teachers indicated that students had come from programs utilizing CSMP. Seven teachers did not state reasons for the success of the new children in adapting to CSMP.

Two second grade teachers (7%) felt that new students were not successful in catching up with the rest of the class while 10 teachers (35%) replied that some students were successful while others were not. Reasons given for unsuccessful adaptation were:

a) student came late in year (4 responses)
b) student was slow (3 responses)
c) student had emotional problems (1 response)
d) students fought the use of the Minicomputer (1 response)
e) student could not speak English (1 response)
f) lack of student interest (1 response)

Third grade teachers reported a total of 36 new students while split classes added 9 new students. Out of 12 teachers responding to this question, 7 (58%) reported that their new students were successful in catching up with the rest of the class. When asked to explain the reasons for their success, 4 teachers indicated that students received extra help from the teacher while one volunteered that other students helped explain the material. One teacher felt her student's success was due to his high ability.

One third grade teacher felt that new students were not successful in catching up with the rest of the class while 4 teachers replied that some students were successful while others were not. Reasons given for unsuccessful adaptation were:

a) student came in late (2 responses)
b) student was slow (1 response)
c) student was not interested (1 response)

## Implementation of the Program

Question: a) During this last year:
How many times per day did you usually teach math?
What was the total number of minutes on the average?
b) The last time you taught Non-CSMP math at this grade level:
How many times per day did you usually teach math?
What was the total number of minutes on the average?

Second Grade Responses:

Table 1

| Number of Times Daily Spent Teaching Math | CSMP | Previous Math Curriculum |
|---|---|---|
| Once daily | 23(80%) | 26(96%)* |
| Twice daily | 6(20%) | 1(04%) |

*The percentages in the two columns are based on different totals.

Table 2

| Time Spent Teaching Math | CSMP | Previous Math Curriculum |
|---|---|---|
| 25 min/daily | 0 | 1(04%) |
| 30-45 min/daily | 20(64%) | 19(73%) |
| 46-60 min/daily | 10(31%) | 6(23%) |
| 61-75 min/daily | 2(05%) | 0 |
| 90 min/daily | 0 | 0 |

Third Grade Responses:

Table 3

| Number of Times Daily Spent Teaching Math | CSMP | Previous Math Curriculum |
|---|---|---|
| Once daily | 13(81%) | 15(88%) |
| Twice daily | 2(13%) | 1(06%) |
| Mixed | 1(06%) | 1(06%) |

Table 4

| Number of Times Daily Spent Teaching Math | CSMP | Previous Math Curriculum |
|---|---|---|
| 25 min/daily | 0 | 0 |
| 30-45 min/daily | 7(41%) | 8(47%) |
| 46-60 min/daily | 8(47%) | 8(47%) |
| 61-75 min/daily | 1(06%) | 0 |
| 90 min/daily | 1(06%) | 1(06%) |

Question: Compared to the recommendation in the CSMP guide, how much emphasis did you put on each of the following topics?

Table 5

| | 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|---|
| | More | Same | Less | More | Same | Less |
| Numerical Algorithms | 31(74%) | 10(24%) | 1(02%) | 4(50%) | 4(50%) | 0 |
| Numerical Relations | 20(69%) | 9(31%) | 0 | 7(41%) | 10(59%) | 0 |
| Language of Strings | 8(29%) | 17(61%) | 3(10%) | 0 | 17(89%) | 2(11%) |
| Language of Arrows | 12(41%) | 17(59%) | 0 | 1(5.5%) | 17(89%) | 1(5.5%) |
| Geometry & Measurement | 0 | 12(41%) | 17(59%) | 2(12%) | 9(53%) | 6(35%) |
| Probability | 1(03%) | 11(35%) | 19(61%) | 1(06%) | 9(50%) | 8(44%) |

Question: Which one of the following three best characterizes your math curriculum?

1) CSMP program during essentially 100% of the math time.
2) Basically the CSMP program during approximately ____% of the math time but supplemented with drill or lessons in various numerical skills.
3) The CSMP program approximately ____% of the time, as a supplement to the basic program, which consisted of _____.

Second and Third Grade Responses

Table 6

| | 2nd grade | 3rd grade | Mixed Level |
|---|---|---|---|
| CSMP program during essentially 100% of the math time | 11 (38%) | 2 (15%) | 1 (50%) |
| Basically the CSMP program but with supplements | 18 (62%) | 11 (85%) | 1 (50%) |
| Used CSMP as a supplement to another math program | 0 | 0 | 0 |

Seventy-two percent of the second and third grade teachers who supplement CSMP stated that they basically use CSMP at least 80% of the time, while the remaining 28% stated they basically use CSMP materials at least 70% of the time.

## Perception of 1975-76 Students' Achievement and Attitudes

Question: Please indicate the approximate percentage of your students, who are above average, within the average range, and below average in ability.

Table 7

| 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|
| Across teachers, the mean percent of students who are: | | | Across teachers, the mean percent of students who are: | | |
| Above Average | Average | Below Average | Above Average | Average | Below Average |
| 25% | 51% | 24% | 20% | 43% | 37% |

It should be noted, however, that 17% of the 3rd grade teachers felt that over 75% of their classes were made up of "below average" students.

Question: Please rate student achievement in math for CSMP students as generally compared to other math curriculums you have taught. For each category of student below (above average, within average range, below average), give a rating of:

1 (much worse)
2 (worse)
3 (about the same)
4 (better)
5 (much better)

Table 8

| | 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|---|
| | Above Average | Average | Below Average | Above Average | Average | Below Average |
| Much Worse | 0 | 0 | 1(4%) | 0 | 0 | 0 |
| Worse | 0 | 0 | 2(8%) | | 0 | 2(15%) |
| About the Same | 5(21%) | 9(36%) | 10(40%) | 3(30%) | 3(25%) | 5(38%) |
| Better | 6(25%) | 12(48%) | 8(32%) | 3(30%) | 4(33%) | 4(31%) |
| Much Better | 13(54%) | 4(16%) | 4(16%) | 4(40%) | 5(42%) | 2(15%) |

Over half the teachers felt that their above average and average students did "better" or "much better" with CSMP than they would have with another program. In regard to below average students, the majority of the teachers felt they did "the same" or "better" with CSMP.

Question: Please rate student attitude towards ıth for CSMP students as generally compared to other math curriculums you have taught.

Table 9

| | 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|---|
| | Above Average | Average | Below Average | Above Average | Average | Below Average |
| Much Worse | 0 | 0 | 0 | 0 | 0 | 0 |
| Worse | 0 | 0 | 1(03%) | 0 | 0 | 0 |
| About the Same | 2(08%) | 5(19%) | 9(35%) | 2(20%) | 3(25%) | 3(23%) |
| Better | 8(33.5%) | 12(46%) | 8(31%) | 2(20%) | 3(25%) | 3(23%) |
| Much Better | 14(58.5%) | 9(35%) | 8(31%) | 6(60%) | 6(50%) | 4(31%) |

For all levels of student ability, but especially for below average students, teachers generally rated student attitude with CSMP slightly higher than student achievement, though both attitude and achievement compared favorably with previous math curriculums used.

Question: Please indicate the approximate percentage of your students who:
1) work best on their own
2) work best with some guidance
3) work best under close supervision.

Table 10

| 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|
| Across teachers, the mean percent of students who: | | | Across teachers, the mean percent of students who: | | |
| work best on their own | work best with some guidance | work best under close supervision | work best on their own | work best with some guidance | work best under close supervision |
| 28% | 53% | 19% | 27% | 42% | 31% |

(It should be noted, however, that 18% of the 3rd grade teachers felt that between 51% and 75% of their students work best "under close supervision".)

Tables 10 and 11 below describe the responses comparing achievement and attitude with CSMP compared to previous curricula according to these types of students.

Table 11

Achievement in Math: Comparison With Previous (Non-CSMP) Program

| | 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|---|
| | work best on their own | work best with some guidance | work best with close supervision | work best on their own | work best with some guidance | work best with close supervision |
| Much Worse | 0 | 0 | 0 | 0 | 0 | 0 |
| Worse | 0 | 1(04%) | 2(10%) | 1(08%) | 1(08%) | 2(15%) |
| About the Same | 6(29%) | 5(21%) | 8(38%) | 3(23%) | 4(31%) | 6(46%) |
| Better | 5(24%) | 11(46%) | 8(38%) | 2(15%) | 6(46%) | 4(31%) |
| Much Better | 10(47%) | 7(29%) | 3(14%) | 7(54%) | 2(15%) | 1(08%) |

Table 12

Attitude Toward Math: Comparison With Previous (Non-CSMP) Program

| | 2nd Grade | | | 3rd Grade | | |
|---|---|---|---|---|---|---|
| | work best on their own | work best with some guidance | work best with close supervision | work best on their own | work best with some guidance | work best with close supervision |
| Much Worse | 0 | 0 | 1(05%) | 0 | 0 | 0 |
| Worse | 0 | 1(04%) | 1(05%) | 0 | 0 | 0 |
| About the Same | 3(15%) | 4(16%) | 8(38%) | 3(23%) | 4(31%) | 5(38%) |
| Better | 4(20%) | 10(42%) | 6(28%) | 0 | 3(23%) | 4(31%) |
| Much Better | 13(65%) | 9(38%) | 5(24%) | 10(77%) | 6(46%) | 2(15%) |

Since teachers believe that the majority of their classes are composed of children who work best with some guidance, their perceptions of achievement and attitude in this group is important. Most of the respondents felt that students who "work best on their own", or who "work best with some guidance", do "better" or "much better" with CSMP compared to other math programs. Roughly half of them felt the same in regard to students who "work best under close supervision."

In summary, a review of Tables 6-11 reveals that in regard to ability level and working habits, the compositions of second and third grade classes seem fairly typical. It should be noted, however, that in comparison with the second grade classes, the third grade classes have a higher proportion of below average students and students who work best under close supervision.

In reviewing the responses, four main points should be noted:

1) The pattern of responses is very similar for second and third grade teachers.
2) Student attitude toward math with CSMP is generally rated slightly higher than student achievement.
3) There is the same pattern of responses for questions dealing with ability and work style, with the highest responses for the better students and students who work best alone, and the lowest scores for the below average student and the student who works best under close supervision.
4) In regard to all items, responses were favorable to CSMP. The most neutral responses were given to the question about the achievement of third grade students who work best with close supervision.

Question: List the most recent math curriculums used.

The responses, in order of frequency were the following:

1) Houghton-Mifflin (15 teachers - 39%)
   a) Modern School Mathematics (6 teachers)
   b) Structures in Mathematics (1 teacher)
   c) Mathematics for Individual Achievement (2 teachers)
2) Addison-Wesley (8 teachers - 21%)
3) CSMP (5 teachers - 13%)
4) Scott Foresman (3 teachers - 8%)
   a) Mathematics Around Us (1 teacher)
   b) Seeing Through Numbers (1 teacher)
   c) Scott Foresman (did not specify title) (1 teacher)
5) Silver Burdett (Modern Arithmetic Through Discovery) (2 teachers)
6) Sets and Numbers (1 teacher)
7) Two by Two (1 teacher)
8) Holt-Rhinehart (1 teacher)
9) ABC (1 teacher)
10) Laidlaw (1 teacher)
11) Teacher did not know title of book (1 teacher)

Question: Do you think that it would be helpful for CSMP to provide additional means for giving you a basis for evaluating students' progress? If yes, please describe (if you will) what specifically would be useful.

Overall, 76% of those responding to this question answered in the affirmative. When examined on a separate grade level basis, one finds that 94% of the third grade teachers (17) and 68% of the second grade teachers (21) answered in the affirmative as did the two teachers of the split second and third grade classes.

Table 13*

Suggestions for Means of Evaluating Student Progress

| | 2nd Grade | 3rd Grade | Split Classes |
|---|---|---|---|
| Tests | 18(78%) | 4(33%) | 0 |
| Checklist of minimum requirements | 2(09%) | 2(17%) | 0 |
| Feedback from testing done by evaluators | 1(04%) | 1(08%) | 0 |
| Comparisons with standardized tests of basic math facts | 0 | 3(25%) | 2(100%) |
| No suggestions offered | 2(09%) | 2(17%) | 0 |

*Percentages based on only the responses made by teachers answering the above question in the affirmative.

Experience with CSMP and Evaluation of the Program

Question: Do you have a peer group (i.e. other teachers at your grade level using CSMP) with whom you meet regularly (formally or informally)?

Sixty percent of the third grade teachers and 52% of the second grade teachers stated that they do have such a peer group in their school. In responding to the question: "In what ways is this helpful?", two factors were most often listed. Seventy-five percent of the respondents (18 teachers) stated that this peer group provided what might be called a sharing and comparing function, while 20% (5 teachers) volunteered that the group provided help with ideas and different teaching methods. (Since second and third grade responses were similar, results were combined.) One teacher felt that this peer group was no help at all, adding that it is "discouraging." Eight teachers offered suggestions for making such a peer group more helpful. Five teachers felt the group should meet more often. Other suggestions were: "Set-up guidelines for evaluating one's own teaching successes within a strand" (1 response); "more training" (1 response); and "set-up a designated time to meet with coordinator" (1 response).

Question: Please suggest any revisions you would like to see made in any of the following:

a) Overall layout of teacher's guide (overview, schedule, division into strands).
b) The way the lessons are presented in the guide.
c) Other (workbooks, demonstration materials, workbooks, etc.)

A total of 45 teachers responded to this question. Because responses for a, b and c tended to overlap, they were grouped together. The most frequently mentioned suggestions were related to one of four main issues:

(23 teachers) - Revise daily lesson chart and organization of teacher's manual.

(14 teachers) - Make materials more durable.

(9 teachers) - Revise schedule (only one lesson per day, less material in each lesson, etc.)

(8 teachers) - List materials to be used in lesson in one central place (at the beginning of each lesson).

Other suggestions, made by at least two teachers, were the following:

Teacher's guide in need of more detail.

Suggest more _____ exercises for children to work on (different types of problems or suggestions listed in _____ (blank space).

Better organization of children's materials.

Better bound teacher's guide.

More two-star workbooks needed (or workbooks geared to each child's level of proficiency).

Material too difficult for children.

Give a clearer indication of where one might stop working on a given skill in a strand.

Workbooks should be marked as to which pages should be checked.

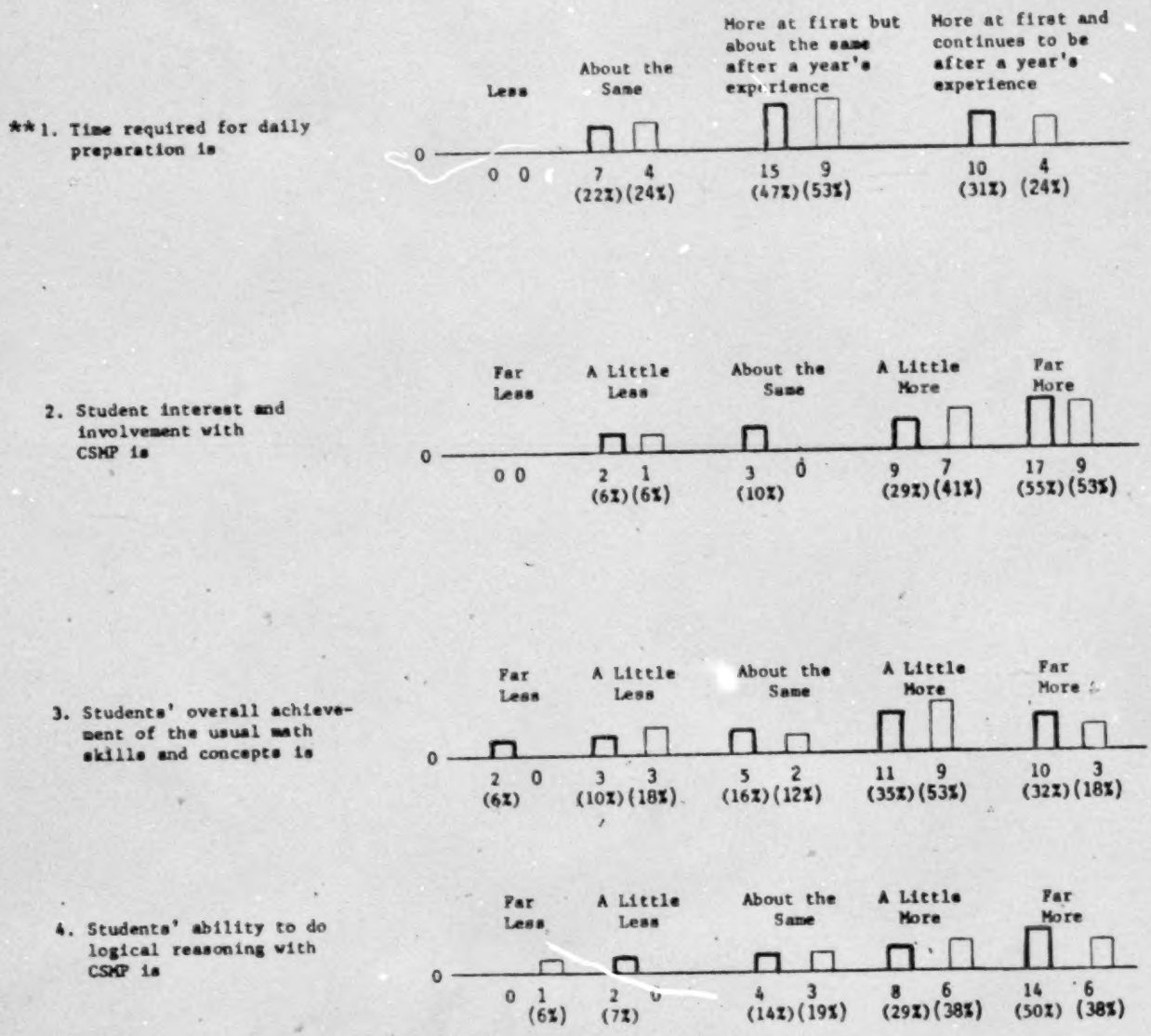
Outline objectives for each lesson.

The responses to the above question are listed in full in Appendix II.

Question: Compared to the previous mathematics programs you have used, how does CSMP compare on the following items:

Figure 1

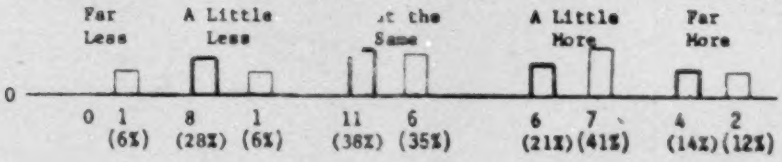
Second and Third Grade Responses*:



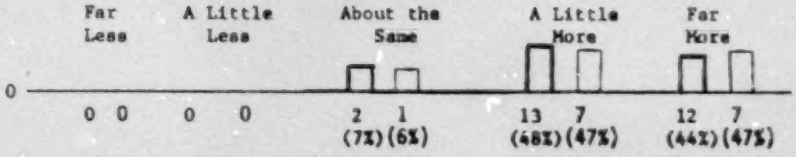

*The first entry in heavier print, is for responses of second grade teachers; the second entry, is for responses of third grade teachers.

**The height of the bars is proportional to the percent of the teachers choosing each alternative.

5. Students' facility in solving word problems with CSMP is




6. Overall quality of CSMP is




7. The appropriateness of CSMP for low ability students is

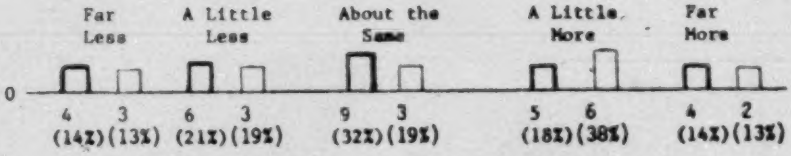



Figure 1 above may be summarized in four points:

1) Time preparation. Approximately half of the teachers felt that CSMP requires more preparation time at first but about the same after a year's experience. The remaining teachers' choices were divided between the responses "the same preparation time" and "more at first and continues to be after a year's experience". (Question #1)
2) CSMP compared favorably with previously used math curricula in the following areas:
   a) student interest and involvement (Question #2)
   b) students' overall achievement of the usual math skills and concepts. (Question #3)
   c) overall quality of CSMP (Question #6)
   d) students' ability to do logical reasoning (Question #4)
3) Responses tended to be more neutral when comparing CSMP with previously used math curricula in the following areas:
   a) students' facility in solving word problems (Question #5)
   b) appropriateness of CSMP for low ability students (Question #7)
4) A comparison of second and third grade responses reveals three questions which elicited more favorable-to-CSMP responses from third grade teachers:
   a) appropriateness of CSMP for low ability students (Question #7)
   b) students' facility in solving word problems with CSMP (Question #5)
   c) student interest and involvement with CSMP (Question #2)

Five of the above questions have been asked in previous questionnaires, and it is interesting to note differences (or the lack thereof) in teachers' views of CSMP. Data from previous questionnaires have been based largely on responses from kindergarten and first grade teachers while data from this year is based on second and third grade teachers. Thus, the following tables will reflect differences as a function of grade level.

Table 14

Time required for daily preparation is:

| | 73-74 (K-1) | 74-75 (K-1) | 74-75 (2) | 75-76 (2) | 75-76 (3) |
|---|---|---|---|---|---|
| less | 7% | 11% | 14% | 0 | 0 |
| about the same | 18% | 30% | 19% | 22% | 24% |
| more now but would be about the same after a year's experience | 65% | 49% | 67% | 47% | 53% |
| more and would continue to be after a year's experience | 7% | 11% | 0 | 31% | 24% |

Table 15

Student interest and involvement with CSMP is

| | 73-74 (K-1) | 74-75 (K-1) | 74-75 (2) | 75-76 (2) | 75-76 (3) |
|---|---|---|---|---|---|
| far less | 0 | 0 | 0 | 0 | 0 |
| a little less | 0 | 1% | 0 | 6% | 6% |
| about the same | 10% | 6% | 5% | 10% | 0 |
| a little more | 17% | 24% | 27% | 29% | 41% |
| far more | 73% | 69% | 68% | 55% | 53% |

Table 16

Students' overall achievement of the usual math skills and concepts with CSMP is:

| | 73-74 (K-1) | 74-75 (K-1) | 74-75 (2) | 75-76 (2) | 75-76 (3) |
|---|---|---|---|---|---|
| far less | 0 | 1% | 0 | 6% | 0 |
| less | 0 | 3% | 0 | 10% | 18% |
| about the same | 3% | 9% | 10% | 16% | 12% |
| a little more | 35% | 37% | 38% | 35% | 53% |
| far more | 62% | 50% | 52% | 32% | 18% |

Table 17

Overall quality of CSMP is

| | 73-74 (K-1) | 74-75 (K-1) | 74-75 (2) | 75-76 (2) | 75-76 (3) |
|---|---|---|---|---|---|
| much lower | 0 | 1% | 0 | 0 | 0 |
| slightly lower | 0 | 3% | 0 | 0 | 0 |
| about the same | 0 | 6% | 0 | 7% | 6% |
| slightly higher | 48% | 30% | 29% | 48% | 47% |
| much higher | 52% | 60% | 71% | 44% | 47% |

Table 18

Appropriateness for low ability students

| | 73-74 (K-1) | 74-75 (K-1) | 74-75 (2) | 75-76 (2) | 75-76 (3) |
|---|---|---|---|---|---|
| far less | 4% | 20% | 18% | 14% | 13% |
| less | 16% | 21% | 12% | 21% | 19% |
| about the same | 36% | 23% | 17% | 32% | 19% |
| a little more | 40% | 25% | 18% | 18% | 38% |
| far more | 4% | 11% | 35% | 14% | 13% |

Seven second grade teachers and four third grade teachers answered the same questions in both the '74-'75 questionnaire and the '75-'76 questionnaire. In order to examine differences over time and experience with CSMP, their responses to the following questions were compared:

student interest
overall achievement
overall quality
appropriateness for low ability students

Roughly half of the second grade teachers did not change their responses from the past year, while roughly half lowered their responses by one measurement unit (where measurement units = far less, less, about the same, a little more, far more).

Question: "What is your opinion of the spiral approach as used in CSMP?"

Forty-seven teachers responded to this question. Responses were judged to fall within three categories: positive, mixed, and negative. Two teachers did not attend to the question being asked. Responses are depicted in Table 19 below. The responses are given in full in Appendix III.

Table 19

Opinion of Spiral Approach

| | 2nd Grade | Third Grade | Mixed |
|---|---|---|---|
| Positive | 19(61%) | 9(69%) | |
| Mixed | 7(23%) | 2(15.5%) | 1 |
| Negative | 5(16%) | 2(15.5%) | |

Question: CSMP is designed with a particular style of classroom management in mind.

a) Would you prefer there to be:
- ☐ more individual work
- ☐ more total class work
- ☐ same proportions as now.

b) Would you prefer there to be:
- ☐ more student initiated time
- ☐ less student initiated time
- ☐ same as is the case now.

Responses to the above questions are summarized in Table 21 below.

**Table 20**

Classroom management preferences

| | 2nd Grade | 3rd Grade | Mixed |
|---|---|---|---|
| more individual work | 6(19%) | 4(22%) | 0 |
| more total class work | 3(09%) | 2(11%) | 1 |
| same proportions as now | 23(72%) | 12(67%) | 1 |
| more student initiated time | 9(29%) | 4(22%) | 2 |
| less student initiated time | 1(03%) | 1(06%) | 0 |
| same as is the case now | 21(68%) | 12(72%) | 0 |

A review of these responses indicates that roughly two-thirds of the teachers are happy with the style of classroom management proposed by CSMP. Of the remaining one-third of the teachers, the majority would favor more individual work and more student initiated time.

Question: In an effort to determine teachers' perceptions of valuable qualities in a CSMP teacher, respondents were asked to choose four (out of a list of twelve) characteristics they believed to be the most valuable in a CSMP teacher. In descending order of frequency, the characteristics chosen were:

(1) ability to give clear explanations (30 responses)
(2) skill in classroom questioning techniques (29 responses)
(3) interest in mathematics (26 responses)
(4) self-confidence (20 responses)
(5) skill in planning class lessons and prescribing individual work (17 responses)
(6) ability to work well with individual students (17 responses)
(7) ability to deal well with student ideas (16 responses)
(8) initiative (16 responses)
(9) imagination/active fantasy life (11 responses)
(10) ringmastership: ability to keep many separate activities going at once (9 responses)
(11) showmanship (5 responses)
(12) strong math background (4 responses)

Question: In a paragraph or two please give your overall evaluation of CSMP, based on your experience with it this past year.

There were no differences of consequence between second and third grade teachers' responses. To facilitate ease of presenting the data, the responses were combined. Out of a total of 52 responses, 47 were judged to be positive and 4 negative. One teacher did not attend to the question asked. Of the 47 responses judged to be positive, 30 (64%) were unqualified positive statements while the remaining 17 were qualified positive evaluations. Of these 17, five responses dealt with the problem of the slow learner in CSMP. Overall, 90% of the evaluations were judged to be positive. The responses are given in full in Appendix IV.

## Summary

One hundred fourteen questionnaires were distributed to CSMP teachers at the second and third grade levels. Fifty-four percent did not return the questionnaires, and the findings reported herein are therefore based on 46% of the teacher sample. For the purpose of summarizing the data, second and third grade teacher responses are combined.

1) Implementation of program -
   a) Three-quarters of the teachers supplemented the program with Non-CSMP material such as commercial worksheets, a figure comparable to that from previous questionnaires in lower grade levels (page 6).
   b) Compared to the recommendations in the CSMP guide, at least half the teachers indicated they spent more time on numerical algorithms and numerical relations and less time on geometry and on probability, statistics and combinatorics (page 5).
   c) Fifty-six percent of the teachers reported that new students were successful in catching-up with the rest of the class. Thirty-six percent of the respondents indicated that some new students were successful in catching-up while others were not. Reasons given most frequently for failure to catch up were:
      i) student came late in the year; and
      ii) student was slow (page 3).

2) Teachers' perceptions of student achievement -
   a) In reference to the average and above average students, over half the teachers felt that they did "better" or "much better" in math with CSMP than they would have with another program. In reference to the below average students, almost half (48%) of the teachers felt that they performed "better" with CSMP, while 13% felt that below average students did "worse" or "much worse" with CSMP in comparison with other math programs (page 7).
   b) In reference to students who "work best alone" or "work best with some guidance", over half the teachers felt they did "better" or "much better" with CSMP than they would have with previously used math programs. When asked about the students who "work best with close supervision", almost half (47%) indicated they did "better" or "much better" with CSMP, though about as many (41%) felt they did "about the same" (page 9).

3) Teachers' perceptions of student attitudes toward math -
   a) In reference to their average and above average students, over 75% felt they had "better" or "much better" attitudes toward math with CSMP than with other math programs. When asked their perceptions of the below average students, over half (60%) indicated their attitudes toward math were "better" or "much better" with CSMP. Only 3% of the teachers indicated that student attitudes were "worse" with CSMP, and these were in reference to below average students (page 8).
   b) In reference to students who "work best alone" or "work best with some guidance", over 70% of the respondents indicated that they have a "better" or "much better" attitude toward math with CSMP. Only 3% of the respondents indicated that students who "work best with some guidance" have a "worse" attitude toward math with CSMP. In reference to students who "work best with close supervision", 50% felt they had "better" or "much better" attitudes toward math with CSMP. Only 12% felt these students had "worse" or "much worse" attitudes toward math with CSMP (page 9).

4) Evaluation of student's progress -
Seventy-six percent of the respondents indicated they would like CSMP to provide them with a means of evaluating their students' progress, with the majority of teachers suggesting that tests be employed for this purpose (page 11).

5) Four main suggestions for revisions were made -
a) Revise daily lesson chart and organization of teacher's manual.
b) Make materials more durable.
c) Revise schedule (only one lesson per day, less material in each lesson, etc.)
d) List materials to be used in lesson in one central place (at the beginning of each lesson) (page 12).

6) Comparison with other math curricula -
CSMP compared favorably with previously used math curricula on the following dimensions:
- student interest and involvement
- students' overall achievement of the usual math skills and concepts
- students' ability to do logical reasoning
- overall quality

There was very little difference between teachers' ratings of CSMP and previous math programs along the following dimensions:
- appropriateness of CSMP for low ability students;
- students' facility in solving word problems

When daily preparation time with CSMP was compared with previous math curricula, almost half of the teachers indicated that CSMP required more preparation time at first but about the same after a year's experience, while 29% felt that daily preparation time continued (or would continue) to be greater, even after a year's experience teaching CSMP (pages 13 and 14).

7) Comparison with previous questionnaires -
a) Second and third grade teachers estimated the need for more daily preparation time than did their kindergarten and first grade counterparts in past years.
b) Second and third grade teachers' evaluations of students' overall achievement with CSMP was lower than evaluations previously reported by kindergarten and first grade teachers, although 69% still rated overall achievement with CSMP as "a little more" or "far more" than with previous math programs.
c) Teachers continued to compare CSMP's overall quality favorably with other math programs (pages 15 and 16).

8) Evaluation of the spiral approach -
When asked to respond in a free response style to the question: "What is your opinion of the spiral approach as used in CSMP?", 58% of the resulting responses were judged to be positive, 9% were judged to be negative and 15% were judged to be mixed reactions. Two teachers did not attend to the question being asked (page 17).

9) Preferred style of classroom management -
The majority of teachers were happy with the style of classroom management proposed by CSMP, though 29% would prefer more student initiated time (page 18).

10) Overall Evaluation -
In a free response question asking teachers to give their overall evaluation of CSMP, 90% of the resulting responses were judged to be positive and 8% were judged to be negative (one teacher did not attend to the question being asked (page 19).

Appendix I

CSMP Questionnaire for Second and Third Grade Teachers

CSMP Questionnaire for Second & Third Grade Teachers

A. Description of your 1975-76 class

1. My class is (check one)

☐ a second grade

☐ a third grade

☐ a mixture of _____

2. a. Approximately how many students who were in your class in Sept. are no longer in it now? _____. How many of these students, if any, were placed in a Non-CSMP class in your school? _____

Why? _____

_____

_____

b. Approximately how many students who are in your class now were not in it on October 1? _____. How successful were these students in catching up with the rest of the class and why?

_____

_____

_____

_____

B. Description of your 1975-76 math curriculum

1. a. During this last year:

How many times per day did you usually teach math? _____

What was the total number of minutes on the average? _____

b. The last time you taught Non-CSMP math at this grade level:

How many times per day did you usually teach math? _____

What was the total number of minutes on the average? _____

IGNORE THE NEXT QUESTION IF YOU HAVE (OR WILL HAVE) SENT IN YOUR TEACHER'S LOG FOR MAY.

2. Considering just the CSMP portion of your math curriculum, describe your use of the program.

Examples: "Used lessons 175-308 from the first grade program and weeks 1-16 of Part I."

"Used weeks 1-16 of Part I and weeks 1-12 of Part II."

(For Parts I & II consider only the numerical strand.)

_____

_____

_____

_____

3. Compared to the recommendation in the CSMP guide, how much emphasis did you put on each of the following topics?

| | More | Same | Less |
|---|---|---|---|
| Numerical Algorithms | ☐ | ☐ | ☐ |
| Numerical Relations | ☐ | ☐ | ☐ |
| Language of Strings | ☐ | ☐ | ☐ |
| Language of Arrows | ☐ | ☐ | ☐ |
| Geometry & Measurement | ☐ | ☐ | ☐ |
| Probability, Statistics & Combinatorics | ☐ | ☐ | ☐ |

4. Which of the following three best characterizes your math curriculum? (Check one box and complete the sentence if need be)

☐ CSMP program during essentially 100% of the math time.

☐ Basically the CSMP program, during approximately _____% of the math time, but supplemented with (a) and (b) below:
(a) practice (or drill) in the following numerical skills

_____

_____

and/or the following other math topics _____

_____

_____

using mainly: (circle)

teacher made material commercial material blackboard work

(b) lessons (or units) in the following numerical skills

_____

_____

and/or the following other math topics _____

_____

_____

using mainly: (circle)

teacher developed lessons lessons from a commercial test

☐ the CSMP program, approximately _____% of the time, as a supplement to the basic program, which consisted of

_____

_____

C. Perception of 1975-76 students' achievement and attitudes.

1. Please rate student achievement in math and student attitude towards math for CSMP students as generally compared to other math curriculums you have taught. For each category of student below, give a rating of:

   1 (much worse)
   2 (worse)
   3 (about the same)
   4 (better)
   5 (much better)

   Also please indicate the approximate percentage of your students in each category.

| | Percent in Category | Achievement | Attitude |
|---|---|---|---|
| Students with ability level: | | | |
| a) Above average | ☐ | _____ | _____ |
| b) Within average range | ☐ | _____ | _____ |
| c) Below average | ☐ | _____ | _____ |
| Students who work best: | | | |
| a) on their own | ☐ | _____ | _____ |
| b) with some guidance | ☐ | _____ | _____ |
| c) under close supervision | ☐ | _____ | _____ |

   Most recent math curriculums used:

   _____

   _____

2. Do you think that it would be helpful for CSMP to provide additional means for giving you a basis for evaluating your students' progress?

   Yes ☐ No ☐

   If yes, please describe (if you will) what specifically would be useful

   _____

   _____

   _____

   _____

D. Your own experience with CSMP

1. a. Do you have a peer group (i.e. other teachers at your grade level using CSMP) with whom you meet regularly (formally or informally)? _____

   b. In what ways is this helpful? _____

   _____

   c. In what ways could this be more helpful? _____

   _____

   _____

2. Please suggest any revisions you would like to see made in any of the following:

   a) Overall layout of teachers' guide (overview, schedule, division into strands)

   _____

   _____

   _____

   _____

   _____

   b) The way the lessons are presented in the guide

   _____

   _____

   _____

   _____

   _____

   c) Other (worksheets, demonstration materials, workbooks, etc.)

   _____

   _____

   _____

   _____

   _____

3. Compared to previous mathematics programs you have used, how does CSMP compare on the following items:

a) Time required for daily preparation is

**(less) (about the same) (more at first but about the same after a year's experience) (more at first and continues to be after a year's experience)**

b) Student interest and involvement with CSMP is

**(far less) (a little less) (about the same) (a little more) (far more)**

c) Students' overall achievement of the usual math skills and concepts with CSMP is

**(far less) (a little less) (about the same) (a little more) (far more)**

d) Students' ability to do logical reasoning with CSMP is

**(far less) (a little less) (about the same) (a little more) (far more)**

e) Students' facility in solving word problems with CSMP is

**(far less) (a little less) (about the same) (a little more) (far more)**

f) Overall quality of CSMP is

**(much lower) (slightly lower) (about the same) (slightly higher) (much higher)**

g) The appropriateness of CSMP for low ability students is

**(much lower) (slightly lower) (about the same) (slightly higher) (much higher)**

4. CSMP is designed to be a curriculum using the spiral approach to teaching and learning. What is your opinion of this approach as used in CSMP?

_____

_____

_____

_____

_____

5. CSMP is designed with a particular style of classroom management in mind.

a. Would you prefer there to be: ☐ more individual work
☐ more total class work
☐ same proportions as now

b. Would you prefer there to be: ☐ more student initiated time
☐ less student initiated time
☐ same as is the case now

6. Check the 4 characteristics most valuable in a CSMP teacher.

_____ strong math background

_____ imagination/active fantasy life

_____ showmanship

_____ ringmastership: ability to keep many separate activities going at once

_____ skill in classroom questioning techniques

_____ ability to work well with individual students

_____ skill in planning class lessons and prescribing individual work

_____ initiative

_____ interest in mathematics

_____ ability to deal well with student ideas

_____ ability to give clear explanations

_____ self-confidence

7. In a paragraph or two please give your overall evaluation of CSMP, based on your experience with it this past year.



Name _____ _____

School System _____

## Appendix II

### Responses to Question D2

"Please suggest any revisions you would like to see made in any of the following:
a) Overall layout of teachers' guide (overview, schedule, division into strands)
b) The way the lessons are presented in the guide
c) Other (worksheets, demonstration materials, workbooks, etc.)"

In this Appendix, for each respondent space has been allowed for responses to each of the three parts to this question (a, b or c). A dash (—) indicates no response was given to that particular part. Respondents are separated by a dotted line ( . . . . .).

Appendix II

"Did not care for teacher's guide this year - too little on a page, therefore had to be constantly turning pages in a lesson - also, would have been more helpful if materials needed and worksheet numbers were listed with the lesson plans."

--

"None (however, did prefer the old 2nd grade workbooks to the newer ones)."

. . . . . .

"I like the second grade math manuals. It would be nice to have a better daily lesson chart to follow for next year."

--

--

. . . . . .

"Better stress on one lesson per day. (However, I'm aware I don't need to follow the schedule.) Have one lesson a week be a game with no worksheets (Day would be varied.). This would create interest and less boredom."

"Put materials needed before presenting lesson (read this in a newsletter from other CSMP teacher). Put answer worksheets in one pile at rear of each book. Would be much easier to find!"

"Have more workbooks, but shorten them by 3 pages. Marble shakers are flimsy and hard for children to observe marble colors - perhaps have marbles fall out. Have more 2 star worksheets - some children find 3 stars much too frustrating and the 1 stars don't offer any motivation. More 2 stars would challenge the average and slower children gradually."

. . . . . .

--

"More days with only one lesson per day. Some concepts are too difficult to squeeze two into one lesson."

--

. . . . . .

"I like to have the guide book for directive as it was outlined last year. Too many guides and areas to thumb through."

"A few need more detail."

"Workbooks should be marked as to which pages to be checked as they were before. I really felt lost this year as to what they were expected to be able to do this year."

. . . . . .

"I had no problems with the overall layout. However, adequate direction seemed lacking since the writers of this curriculum had their own ideas of how much material they wanted covered from each strand. Sometimes I felt a little uneasy and wondered if I had adequately presented the lesson."

--

"I liked it much better when each child was given a workbook geared to his or her proficiency instead of each child given the same workbook and presented with a second when the first is completed. Some of my students tended to copy other students' answers and I don't think that individual differences were allowed for as they were when utilizing the workbooks provided during 1974-75."

. . . . . .

"Please return to a combination of the old teacher's guide and new - that new guide is the worst I have ever seen. You have to turn to 3 areas to find the information for any one lesson."

"Have a clearer indication of where one might stop working on a given skill in a strand."

--

. . . . . .

"The first grade guide spells it out much more clearly - looking at the schedule - then finding it in the two guides then forming a lesson plan - too time consuming. If I didn't finish up with Gr. I before starting - not enough work."

"It is hard to tell where one starts and another begins. With fast groups not enough work."

"More plans for children to copy problems - putting numbers down in right position for adding - more word problems to apply skills."

. . . . . .

--

"None."

--

. . . . . .

--

"More clarification of materials to be used."

"Better organizations of children's materials to save time in lesson planning."

. . . . . .

"I would like more practice on my skills introduced - I mean a return sooner to a new skill such as when (N3.3) carrying was taught it was not returned to for some time. The same with (N51 and N52) subtraction. Return is too belated. I felt more subtraction was needed."

"Good except I found one that was not explicit enough - P1.8. I found children going to where spinner stopped, despite 2 practice games."

"Help is needed at beginning of semester to get these in order. Aides helped but got last ones on top despite directions to put #1 on top."

. . . . . .

"Lesson material given on Monday schedule. (Only one lesson - confusing to do 2 different lessons for slower children.) Guides - materials made out of stronger materials. Mine are in a torn condition."

"The lessons are presented very well in the guide and very helpful to teachers new to the program."

"1. More worksheets on starred one and two levels.
2. More workbooks on starred two level."

. . . . . .

"I much prefer the new schedule. Could the guides be changed to the W.B. size? Include more on measurement to develop metric system."

"I would like each day's lessons to be presented in sequence by days. It is inconvenient to shuffle through all 6 books to find the proper lesson."

"Be sure the holes punched in the marble shakers are not too big."

. . . . . .

"1) Objectives outlined for each lesson.
2) Key points to introduce or reinforce in each lesson.
3) Mastery level skills expected by end of grade two."

"1) Combine table of contents and materials needed page.
2) Insert outlining objective of lesson and whether introductory or reinforcing lesson and if it can be used as a checkpoint for mastery."

"Excellent supportive materials."

. . . . . .

"The probability lessons are difficult because the arrows do not turn readily and invariably tear the paper. I would prefer a board of heavy cardboard that perhaps would be interchangeable."

"I like the layout in the second and third grade revised editions."

--

. . . . . .

"I would like to see more lessons on story problems."

--

"I think more use should be made of the workbooks at regular intervals."

. . . . . .

"Make it like the first grade - all one size - make each lesson tell how long it will take and exactly what you need at the top of that lesson."

"Lessons are difficult to find - if each lesson was a completely self contained unit with worksheets, etc. all together it would be more convenient."

"Make demonstration Minicomputer checkers stronger. Put race track games, etc. on separate boards."

. . . . . .

"List of what worksheet accompanies each daily lesson."

--

"More addition and subtraction facts in each workbook for drill."

. . . . . .

"I like the layout this year. It is 100% improvement over last year's plan. I like the division of strands and the spiral effect that it has on students' conceptualization of mathematics."

"There are times when I find that a lesson may be too long or adversley - too short and simple - but, in general, lessons are well put together. Most frequently I do not get 2 lessons (as suggested in plan) into one day's session."

"Indeed - I cannot get through the volume of corrections easily. There are far too many workbooks (too many individually corrected pages and workbooks for the average teacher in self-contained classroom) to wade through unassisted! My only evaluation of the student is by correcting each page myself. We do not exchange and correct other student's work."

. . . . . .

"Better bound teacher guide - day-to-day lessons in numbered sequence rather than in a number of books - worksheets (answer sheets) included after each lesson plan."

--

--

. . . . . .

"I liked the new teacher's manual once I got used to the new layout. I particularly like the schedule for each week."

"Fair."

"I would like to see the workbooks fastened together. (The kids kept getting the pages out of order.)"

. . . . . .

"This is too confusing! It would be much easier if it were arranged in the order that it was going to be used. For example; day 1 (directions for lesson); day 2 (directions for lesson), etc."

"There is too much material that is too hard. Second grade children usually have not covered all of the first grade material. They are given too much too soon."

--

. . . . . .

"Division into strands less on a specific day layout and used as a block."

--

--

. . . . . .

"To have an overall evaluation every six weeks, and one at the end of the program."

--

"More follow-up worksheets for each lesson."

. . . . . .

"I did not like the teacher's guide because I could not find anything in it. It should be more organized (page numbers, etc.)."

"The lessons are good and it tells the teacher what to say. The teacher can use this plus bring in her own materials and thoughts."

"Most of the worksheets were good and I really enjoyed the workbook series. Especially the Review Series."

. . . . . .

"Completely revised and bound - listing what worksheets go with what lessons."

"They should be more in sequence, or at least indexed in sequence, so you won't have to search through a different book every day."

"The Minicomputers should be a bit more substantial."

. . . . . .

"The first grade guide is much simpler to find lessons. I spend a great deal of time trying to locate lessons."

"Sometimes the explanations are vague especially some of the games."

"There are too many materials to stow and keep up with. Much of the material is flimsy and easily destroyed through use."

. . . . . .

"I like the new schedule better than the first schedule we received this year. The manual is difficult to follow. You must jump around too much. I have put page numbers on my schedule to make it easier."

"Some lessons are far too long."

. . . . . .

"Schedule."

--

"More algorithms worksheets."

. . . . . .

"I have enjoyed teaching this entire program. The only suggestion or change would be to put the guides in a looseleaf notebook. I wore out the clips taking the books apart. I couldn't find a notebook that fit the holes."

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. . . . . .

"I feel that the teacher's guides in Gr. 3 were extremely complicated. It could be much better organized, though I realize it was a pilot program this year."

"Some are too long - some too short. Should be sufficient to fill a 30 min. lesson."

"I enjoyed the workbooks and worksheets. I believe the children did also."

. . . . . .

"I would prefer one manual - designed such as the first grade guide. It would be better scheduled to extend to 30 weeks with more emphasis on difficult strings (relations)."

"I would like explanations and examples in teacher's guide separated to show exactly what explanation goes with each worksheet - not one general explanation to be followed with several worksheets."

"Minicomputer checkers are not durable (teacher's or children's)."

. . . . . .

"I would like to work longer in one strand than just one day at a time."

"I like the first grade lesson guides much better than the second grade guides."

"Great! It is so nice to have all the materials provided and right at your fingertips for use!"

. . . . . .

"Contents materials etc. listed in one place."

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. . . . . .

"The teacher's manuals aren't too substantial."

"Little difficult to follow until I was used to it."

"We need something that substitute teachers can use that have had no training in CSMP."

. . . . . .

"I am not a mathematician, therefore objectives accompanying each lesson would help. I liked the layout of the old manual better, but I have gotten used to this one so I can live with it."

--

"I would like more suggestions for mental arithmetic sessions."

. . . . . .

--

"Some lessons assume too much - mostly the lessons are fine."

--

. . . . . .

"O.K."

"Like to have what materials will be needed for the lesson at the first."

--

. . . . . .

"The time allotment is sometimes impossible to meet. This problem throws the entire schedule behind. I worry about those lessons not reached."

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. . . . . .

"Lessons should be put in order, easier to find, and in a hard bound cover. We lost lessons before we got to them. Some important skills are left out."

"Lessons and materials to be used are not explained in enough detail in some lessons."

"Too much material to keep up with. Some materials do not withstand use very well."

. . . . . .

"-Bound copies of guide - at least more sturdy guides.
-Easier to read schedules.
-Page numbers listed in schedules."

"The guide is hard to follow. I wish the answer keys were either with each lesson or in a separate volume. It's hard to keep flipping back and forth."

"Worksheets made into booklets or some type folder to keep the sheets that you work on over several weeks time. More substantial marble shakers, and demonstration Minicomputer checkers (my colored paper peeled off so all mine are white)."

. . . . . .

"I would like for the teacher's guides to follow a sequential pattern along with the suggested schedule and group all materials together in that order."

"I would like to see more introductory materials, especially for those children on the lower level and a teacher knowing the ability of her students can prescribe for her class the amount needed."

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. . . . . .

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"I've made various suggestions in the monthly evaluations."

. . . . . .

"More compact and better organized. It is very large and clumsy."

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. . . . . .

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"They are difficult to find. What about page numbers and a table of contents?"

"Arrive in no organized form. It takes a week to get them organized! I have made a chart with each lesson on it (a copy of the one in the guide) and teacher's needs, children's needs, and play number in the guide, all in different colors with room in each block to write comments. Perhpas a chart like this would be possible to duplicate."

. . . . . .

# Appendix III

## Responses to Question D4

"CSMP is designed to be a curriculum using the spiral approach to teaching and learning. What is your opinion of this approach as used in CSMP?"

The responses of second grade teachers are given first; the responses of third grade teachers begin on page 43.

Responses of Second Grade Teachers

"I approve of the spiral approach to teaching and learning if for no other reason than cultivating and maintaining interest when a room has so many ability levels."

. . . . . .

"I like it."

. . . . . .

"I don't like it because I feel the children get frustrated when they begin something and just when getting involved are switched to something new. Also the spiral approach has too great a span between reintroducing it and I found my children forgot an awful lot and had to repeat the first lessons."

. . . . . .

"I feel uncomfortable leaving a concept that is presented, knowing that some children have not mastered the concept."

. . . . . .

CSMP has done a very good job in this area. Students are not pressured into learning something for mastery the first time it is presented but instead are given numerous opportunities to learn and understand mathematical concepts."

. . . . . .

"I like it - however I find it difficult to use with a split first and second grade. It is difficult to combine skill lessons."

. . . . . .

"The more you work with the system the more one likes it as the monotony is taken away. However, it is hard to make children understand - doing it once isn't learning it - we must come back!"

. . . . . .

"Approach good."

. . . . . .

"I think students should have more than a basic understanding of a concept or skill before going on to another."

. . . . . .

"I like the spiral approach but would like a return sooner to certain skills such as subtraction and addition with carrying."

. . . . . .

"Excellent."

. . . . . .

"The spiral approach to teaching and learning is interesting to observe. New concepts that seemed very difficult at first gradually become easier and easier and they met them again in other lessons."

. . . . . .

"I like this approach but would like to see check points within the spiral other than the major test in May."

. . . . . .

"The spirals are too widely spaced."

. . . . . .

"I like this spiral approach. Once you get used to it, it takes a lot of the frustration out of math for the child."

. . . . . .

"Too much to cover especially on Monday."

. . . . . .

"If they don't get it at first they have other chances."

. . . . . .

"Very good - having repeated many lessons that were formerly very puzzling to some, we now understand them better."

. . . . . .

"Really enjoyable to teach - such student interest! Love the spiral approach. I think it is wonderful in the area of student mastery."

. . . . . .

"Answered under D2 - Spiral approach is a 'natural' approach to learning."

. . . . . .

"I prefer working on a skill until it is mastered - however, I do feel this can be done in a fun way rather than drilling a skill until it's totally dead."

. . . . . .

"I like it and it seems to be of great help to the children."

. . . . . .

"I think certain things (like basic facts) should get more attention before going on and on into more involved computations."

. . . . . .

"I like it. You don't feel so bound to accomplish everything in one year."

. . . . . .

"It was very hard to realize that the spiral would develop in this program. You worry so much about mastery of facts and in the spiral approach you don't have that worry."

. . . . . .

"Seemingly, for our lower students, we feel that we should teach a skill until it is learned before going to another skill."

. . . . . .

"I'm inclined to keep working if I feel children don't understand. It is very hard for me to accept the spiral approach to teaching math."

. . . . . .

"It was a relief to know that the same material would be covered again for those who didn't understand the first time."

. . . . . .

"I like the spiral approach. Children get more practice in all areas. They do not get bored with one topic or concept."

. . . . . .

"I think it was excellent - it was expecially beneficial to the slow learner."

. . . . . .

"Fine. Except when spirals - should be a new lesson - not reteach the same lesson."

. . . . . .

"Good."

. . . . . .

"I like it. The slow students need the repetition but not all at once."

. . . . . .

"I like the spiral approach very much."

. . . . . .

Responses of Third Grade Teachers

"Usually liked very much. Occasionally I would pull a unit and use it with a similar unit instead of waiting."

. . . . . .

"I believe it has worked very well as my children have progressed from first through third grades with CSMP."

. . . . . .

"I think this is the best thing about the program. I think this approach gives the child time to turn it over in his mind. I have been frustrated after certain lessons, but when the spiral came back to that lesson, the children had retained more than I thought."

. . . . . .

"I didn't like it at first, but it seems to work very well considering what the students learn. It's more fun too - they don't get bored."

. . . . . .

"We third grade teachers are impressed with the spiral movement - we approve of picking up time after time."

. . . . . .

"The spiral approach is good for the students who start out in the program and continue but a child transferring in the program is at a disadvantage, especially the slow student."

. . . . . .

"Fantastic!"

. . . . . .

"I need more time with this program - I really can't decide how I feel about the spiral approach. I still worry so much that they aren't getting some of the things."

. . . . . .

"It's hard to let the students go on to another subject when they haven't learned the previous one. What concerns me is they don't seem to know it after coming in contact with it several times."

. . . . . .

"I like it. It puts less pressure on both the teacher and the student when concepts are initially introduced and that makes learning easier."

. . . . . .

"The approach designed is very good. I think the children enjoyed the variety and this helped to eliminate boredom."

. . . . . .

"I think it's good."

. . . . . .

"It is hard to respond - I always feel like I am not sure how much they really learn."

. . . . . .

Responses of Teachers of Mixed Classes

"The children, especially at the first, can not remember from one week to the next what to do. Having a rigid schedule to follow, after we review there is little time left to do that lesson. They get real exasperated if they don't finish a lesson but we don't get back to it for another week."

. . . . . .

# Appendix IV

## Responses to Question D7

"In a paragraph or two please give your overall evaluation of CSMP, based on your experience with it this past year."

The responses of second grade teachers are given first; the responses of third grade teachers begin on page 53.

Responses of Second Grade Classes

"There seemed to be more preparation and involvement this year on the part of the teacher. This sometimes took away from the teacher enthusiasm, thus losing some student enthusiasm. Also, I found such varied abilities in math students that by mid-year (when the difficulty increased), I found it necessary to supplement and divide math groups. Those that did not understand 'anything' were impossible to continue with in a regular group situation. Therefore, more work on the teacher's part again. I enjoyed last year's math from CSMP much more."

. . . . . .

"I think CSMP is an excellent program with interesting lessons, a variety of techniques, and thorough teaching manuals. I especially enjoy the reaction of the children while working on math concepts. They dig in and discover new ideas; they feel excited and successful; and they build confidence in their attitudes about themselves without even knowing it."

. . . . . .

"Overall I like the program because it deals with such a variety of mathematics and also has games that the children really enjoy and yet the students are learning. I really like the string lessons and worksheets. The kids have a lot more fun working these problems, but they also have a tendency to go fast and when I return the papers and the kids see all the errors made because of quickness they become more careful. The major drawback is that new students during the year become frustrated because they don't understand the Minicomputer. Also, slower students really have a hard time all year and need more supplementary work and lessons."

. . . . . .

"CSMP is a very good math program, seems to work well for the above average learner. The slower learner however seems to benefit more from a combination of CSMP and a traditional program of basic math."

. . . . . .

"I enjoy teaching CSMP to the extent that if they were to replace it with our old math curriculum I would be deeply saddened. This is my second year teaching CSMP and I'm beginning to feel that I really know the program or the CSMP curriculum.

My students seemed to enjoy the program, especially working with the A-blocks, translators, MC's and the orange and white rod rulers. They simply fell in love with the storybooks and flash cards.

I have only 2 requests: 1) a teacher's guide developed along the lines of the 1974-75 CSMP second grade teacher's guide; 2) workbooks constructed on more ability levels similar to the ones used during 1974-75."

. . . . . .

"I have been very frustrated! I have had a slow second (13) grade - these kids were not easily motivated nor did they have much self-confidence when it came to exploring on their own.

Also I had an average group of 1st graders at the same time (21). About 1/3 of them were also demanding time - I spent a lot of time going over the same material, in order to give them confidence.

I would not use it again - given the same situation!"

. . . . . .

"On the whole it was a good year with much growth in the ability of my students to understand math concepts. I am slightly worried where the program can go in third grade with my fast students. The MC was discarded with ease. However, the knowledge of basic adding and subtraction facts with slow children has proven somewhat lacking.

CSMP has proven a good program for me to teach as I need change and a challenge."

. . . . . .

"I feel that the program is good. It held the children's interest. I do feel they need more work and activities in learning the basic number facts.

I do not feel I can answer many of these questions with authority, many not applicable as I covered mostly first grade material that had not been completed in first grade."

. . . . . .

"This has been a most exciting year for me. The youngsters I have been working with have had CEMREL since kindergarten, I have had them for the past two years. The class is enthusiastic about math; they especially enjoy the workbooks. Their performance on any math test, Stanford, a traditional math test they were given to compare with youngsters in a traditional program as well as test given by a math supervisor in CEMREL have been beyond my wildest expectations. They excel in mental arithmetic.

Parents are very supportive of this program."

. . . . . .

"I think that this is a fantastic way of teaching mathematics. I am against team teaching because I feel that each teacher should have the satisfaction and pleasure which I experienced teaching CEMREL this year. My one wish is that I had had some introduction before being placed in this situation. Our first grade teacher was helpful when questioned but I did not know the M.C. was on the base 2 until I returned to school in September and our new math teacher explained it to me. After the workshops began with ____ everything was OK. She was tremendous!"

. . . . . .

"On the whole, I think that CSMP is, by far, better than other programs I have used. Every child can experience some form of success with the program. I have found that the program seems to be most beneficial to the average and above average students. CSMP helps to develop rational thinking much better than most programs. CSMP espeically provides challenge and room for growth for the above average student.

On the other hand, I have found that the below average student has tremendous difficulty understanding and using the Minicomputer. It seems to be too abstract. Similarly, students who transfer into a CSMP classroom have initial difficulty adjusting. Average and above average students usually catch up with the class, while below average students falter experiencing confusion."

. . . . . .

"The CSMP has been an interesting and rewarding experience in teaching math. The variety of the program has made it very interesting and exciting to teach. It is truly a new progressive method of teaching math. The children truly enjoy it and ask 'What are we doing today?' They love the Prediction Games, I have had a very positive attitude and have told other teachers who have visited me how much they will enjoy it."

. . . . . .

"I've enjoyed teaching CSMP and have found concept awareness to be much higher than expected in other programs. It is an interesting and challenging program both for students and teacher. For a first year program, I'm pleased with the success we've found in using it. For the majority of pupils, it has proved most adequate in building concepts and skills. I do feel that teaching it for the first time is really tough - it is truly unique and innovative. Because of my inability to understand the purpose of some lessons, I had difficulty in getting them across. But as my confidence strengthened, through continued use of the program, I became more comfortable with the concepts and methods. It will be much easier next year, I'm sure. I only hope the children have received adequate background this year for level 3's program.

Generally, the program is interesting, resourceful, creative and appropriate for most students. It is well written, detailed and a pleasure to use."

. . . . . .

"This was my first year working with CSMP materials and methods. It has been, for the most part, a very successful year in terms of the achievements of my class. I look forward to continuing with CSMP next year. It should be an even better year with one year's experience to rely on.

The workshop last September to help to prepare us for CSMP was extremely helpful in explaining things like the Minicomputer and the Language of Strings and Arrows, etc. I would never have made it through the year without the prior preparation. It certainly helped to alleviate some of my fears concerning the program.

The workshop meetings each month were also a great help. It was a relief to sit down and discuss ideas, questions, and problems with other second grade teachers and to discover that they were seeing and experiencing some of the same things I was. The meetings were also helpful in introducing new material to us. They certainly helped to make a number of difficult things more clear.

As the year is drawing to a close I have a few observations about the CSMP experience.

1. Most of the children in my classroom are doing very well in the program. They seem to understand the 'Why' as well as the 'How to'. They are farther along than my class was last year at this time, and I feel that they really know what they are doing.
2. For some children, however, CSMP was not successful. These include some slower learners and a child who can only deal with very concrete ideas. I took a few children out of the program because I feel that no matter how effective a program is, it isn't always right for all children.
3. I feel that the program should include objectives for each lesson. There have been many times when I have had no idea why I taught a lesson.
4. The first grade program dealt with a lot of fantasy and stories. Unfortunately, the second grade program does not. I found that many times I made up stories to explain ideas for the children, they had an easier time in understanding the concept.
5. New children who have never been exposed to the CSMP program before seem to have a very difficult time with some aspects of the program - especially the Minicomputer. There should be an exact specified series of easily available lessons to introduce new children to the program. I feel that the program doesn't adequately do this at the present time.
6. The lessons for the most part originate as teacher directed. Sometimes they break down into individual activities at levels of difficulty. Sometimes they are entirely teacher directed. This makes it very difficult to be teaching another group in a different program.

Aside from these six observations I am very satisfied with the results I have derived from the CSMP program. It's been an exciting experience which I am very happy to have participated in."

. . . . . .

"I have enjoyed using this CSMP math program. It has helped me to be a better math teacher. It is easily understood and very well constructed for all types of children. It is learning math in a fun way. Once learning becomes fun, even the slowest child will catch on quickly."

. . . . . .

"Key books should be contained in one solid book to prevent loss of pages. Better order of topics of materials to be used. (A,B,C order)."

. . . . . .

"The children enjoy it because it is different from anything they have had."

. . . . . .

"CSMP is the most creative approach to the teaching of math I've ever experienced. I was very nervous at first but the material soon gave me confidence. I have changed my former dread of math to eager anticipation.

The children love the program. It gives them so much more room to create, to explore, to learn. No more dull drill, drill, drill. Achievement is much higher and motivation is never a problem.

Keep up the good work!"

. . . . . .

"Fantastic! I've really enjoyed my 'rookie' year with CSMP! I have found CSMP to be a very complete program. It certainly meets individual needs - better than any other program I've used. And, such student enthusiasm - they really do love 'math time', especially the workbooks!"

. . . . . .

"My experience this year has been rewarding, interesting and, ever exciting. I am pleased with my ability in teaching and I am very gratified with the students' accomplishments. I find that I enjoy the responses that I get from the children in every way - they are eager to participate; eager to have math and thoroughly enjoy the individualization of the work. There never is a feeling of negative responsiveness - math is NEVER a bore! This is my 2nd year in CMEREL and I am much more relaxed; I have a better comprehension of the program and I would not like to have to revert back to the old 'workbook' method of teaching math. There is a lot of material, still, that I can become more adept at, but each year will make a difference. I am strongly supportive of the CSMP program."

. . . . . .

"I have enjoyed working in the program this year. I feel my students have benefitted a lot."

. . . . . .

"The CSMP program is good but I felt that it was poorly organized this year. I found myself having to look in 3 or 4 different places to find my daily lesson. I also taught it last year. I felt more success last year than this year.

Most of the material this year was too hard, especially those lessons dealing with the Minicomputer. Also, much of this program required one to one instruction which is very difficult with an active group of 25 second graders."

. . . . . .

"I have enjoyed teaching the CSMP program. It is a fresh, 'fun' approach to math. In fact, for someone who has always said 'ugh!' to math, it has been a delight!"

. . . . . .

"At first I was absolutely overwhelmed. I felt that I could not possibly do. After spending 4 days in a workshop and spending hours (of my own 'free' time) studying the manuals, talking to my 'peer' group and doing a lot of praying I tackled it. The more I used it the more I liked it. I grew in confidence of myself because I saw response and progress in my students.

I think it is an interesting approach to math and I'm looking forward to trying it another year."

. . . . . .

"The children have enjoyed this program and have shown a great deal of interest. Some of the lessons drag and are uninteresting and too short for the amount of classroom time. They have especially enjoyed the stories introducing new skills. I have no idea how to compare these children. Group 5 had had a good background in their number combinations so are able to do better but group 7 had a rough time and some are still not able to use the computer as much as we have worked with it. Even so, they still seem to enjoy trying."

. . . . . .

"This was just my first year of teaching but I really enjoyed teaching the CSMP math. I do believe this can be a great program if it is started from kindergarten and used throughout the primary grades. In my situation, this was the first year of the program and we had to do a lot of review before we could even start into the program. The program (2nd grade) started off assuming the students had a background in CSMP.

I am glad we are using the program again. Now I know enough about the program to improve my teaching."

. . . . . .

"For lower groups, who lack a good mathematics background, we feel that math program should be used during the second semester. This gives us time to instruct, drill, and master basic facts."

. . . . . .

"My overall opinion of CSMP math is favorable. The children are interested and that makes it easier for me to teach. The students never grumble about having to do math.

I think it will be easier next year because I will be familiar with it."

. . . . . .

"It was with doubt that I approached the CSMP program. After the workshop last summer it seemed doubtful that I would ever understand the program, much less explain it to my class. So it was a very pleasant surprise when my children responded with such enthusiasm to math and seemed to comprehend far more than I expected. As I have not taught before at all it is difficult for me to compare the program to any other, but I was pleased with the response of my class."

. . . . . .

"This is the second year I have taught the CSMP. I like it very well. I liked the manual much better last year than this year. It was much easier to follow.

The children enjoy math and really become involved. Even the slower children are able to succeed in some areas."

. . . . . .

"My students and I loved the program - they were always ready for math. My biggest praise is for the skills and concepts that were developed in the below average students (both in the first grade program and second grade). These children dis-

played far more math ability than children in the traditional programs in previous years."

. . . . . .

"CSMP worked well with the low group. We didn't travel as fast but they enjoyed it. It's much better than what we had and test scores from first grade proves it."

. . . . . .

"I like the program. Some children had difficulty understanding as in all programs. It gives the child that does understand a wider range. I found that drill work was necessary for learning basic facts and developing counting."

. . . . . .

"I feel that CSMP is the best overall math program that I have ever used. If I am ever forced to not teach CSMP, I am sure that I will use several of the teaching methods that I have learned from teaching the program."

. . . . . .

Responses of Third Grade Teachers

"CSMP was very valuable to my classroom. They had many experiences and learned many math concepts."

. . . . . .

"I have really enjoyed teaching the program. The children enjoy math so much more. The only things I object to are: the logs which never fit the 3rd grade lessons."

. . . . . .

"I have enjoyed teaching the 3rd grade CSMP program this year. It is a definite stimulus to the bright and average children. It is a joy to see them 'in operation'. Hopefully the slower children have profited also. However, I do worry about them, and I tend to go back to traditional methods in working with them."

. . . . . .

"I liked CSMP mainly because of the variety it gave children, although there were times I felt that a lesson should have been continued sooner than the CSMP strands allowed (i.e. carrying, borrowing)."

. . . . . .

"I felt that this is the best math program that I've taught. It has been a challenge to the average and above average student and some beneficial help to the under achiever. I believe that it would be hard for me to go back to our standard 'new' math."

. . . . . .

"It is by far the best math program I have ever taught. It is interesting in that every day is different and you never know what the student's reaction will be. I have learned a lot just by teaching the program. I am looking forward to next year since it will be the first year an entire third grade program has been taught. I think our children are far better off after having had this program."

. . . . . .

"The CSMP program is very appealing to both students and some teachers. You have to trust the program to do the job - if you as a teacher follow the instructions of teaching. My students learned many ways of problem solving and thinking strategy. It challenges a student whatever his achievement level. I really have enjoyed teaching and learning myself, for it is a challenge to the teacher.

In my experience, I believe the students were ahead in math with CSMP - and I know it is more enjoyable."

. . . . . .

"For the past two years I have enjoyed teaching CSMP. As a whole each class has enjoyed this type of math presentation. It has given them confidence in mathematics. Used to be too much drill. Now with this program there seems to be more enjoyment of skills and more interest in math."

. . . . . .

"Overall I like the program but I feel there needs to be more work the children can do on their own. In most all cases the material is too teacher orientated and there is not enough reinforcement. The teacher does not have time to work with individual students."

. . . . . .

"I worry about those in lower ability levels achieving. CSMP does seem to help these. I think with more experience I will grow more confident making my success with the program greater."

. . . . . .

"I was very unsure of the program at first. But the more I work with it, the better I like it.

I am looking forward to working with a third grade group on grade level next year. Having such a slow learning group this year seemed to add to my confusion."

. . . . . .

"We have a third grade group of all slow children. We have 3 out of a class of 35 that seem to fit real well in the program. This program used a lot of thinking and reasoning skills and these children need visual and concrete ideas. They have trouble applying what they do know to other situations.

This was the first year in this program for these students and it was recommended they be put in Part I. For a slow group there was too much background missing."

. . . . . .

"I believe that the program itself is exciting and potentially very effective, if it follows the child through elementary school.

It is designed to develop number concept, while at the same time stressing computational skills - and those two things are essential ingredients in any math program. I loved seeing my kids excited about working with big numbers - or realizing that they really did know several operations that were previously mysteries! ('times' for example).

But, I believe they were placed in the wrong program initially (2nd grade instead of entry 3rd) and so had a more difficult time than they should have encountered."

. . . . . .

"The program was very good. I feel that the childrens' interest grew and mastery was shown in some areas where they were uncertain.

I enjoyed teaching it and after this year's experience with the program I feel that next year's program will be a great success."

. . . . . .

"I only worked with CSMP six months but I enjoyed it very much. The students enjoyed working with CSMP and that made it interesting to teach. I'm looking forward to working with Part II with students that have had Part I."

. . . . . .

"I enjoyed teaching it - I thought it was more interesting to teach, however, I don't know if I aroused this interest on the part of the children.

My biggest disappointment was that I felt I couldn't really evaluate it as I would like."

. . . . . .

"At the beginning of the year, I felt overwhelmed by the quantity of materials, books, and lesson plans. As the year progressed, I became more at ease with the program. I liked the program from the beginning because of the interesting way the strands were presented. I must confess I have never liked math and I was rather weak in the field, but CSMP has made math come alive for me.

The students adjusted beautifully to the new program, and I feel they have a much wider concept of numbers than they would have in any other program. I also feel the emphasis placed on mental computations and solutions helps provide an excellent background for other study areas."

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Responses of Teachers of Mixed Classes

"Our situation is unique in that the children in my 3 math classes are ability grouped, so the materials do not always fit with their needs. We are short certain worksheets and over with others.

Generally, it has been a trying year. Of course it is difficult to go into something for the first time with little or no experienced personnel to guide you. The children enjoyed the program. There are many new teaching techniques that are fun and different. I do feel that next year will go much better - from my year of experience plus the children's experience. My main concern and wish is that the program would reserve more time for the teaching of basic facts, time, money, etc."